

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ashley J. Birkett ) PATENT  
Serial No.: 09/930,915 )  
Filed: August 15, 2001 ) Attorney Docket  
For: Immunogenic HBc Chimer ) ICC-102.2  
Particles Having Enhanced ) 4564-81175  
Stability )  
Examiner: ) Group Art Unit:  
                            ) 1614  
                            )

INFORMATION DISCLOSURE STATEMENT

BOX IDS  
Commissioner For Patents  
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. §1.97, Documents A1-A71 are listed on the attached Form PTO-1449. Documents A1-A5 and A15-A31 were disclosed and discussed in the text of the subject patent application. Document A13 is the published PCT application corresponding to the present application.

Document A14 is the published PCT application of a related invention by the present inventor, Application Serial No. 09/931,325 filed August 15, 2001, and Documents A6-A8 and A32-65 were disclosed and discussed in that related pending application by the inventor. Document A6, an issued U.S. patent, and Document A11, its published PCT counterpart,

RECEIVED  
DEC 16 2002  
TECH CENTER 1600/2900  
RECEIVED  
1600/2900  
02 DEC 12 PM 1:44  
TECH CENTER 1600/2900

describe an invention of the present inventor that relates to a hepatitis B core-based vaccine. Documents A9, A12, A66-67 and A71 were located subsequent to the filing of this application, and thought to possibly be material because of their subject matter, and are therefore provided herewith. Document A68 is a poster presented by the inventor and co-workers in October of 1999 of results using vaccine candidates.

None of these cited documents disclose, enable or teach claimed subject matter of the present invention.

No inferences should be drawn that the attached list represents a comprehensive investigation, or that any material disclosed is equivalent to the subject invention.

The cited documents disclose numerous specific features. There has been no attempt to list each and every feature disclosed by each document. The Examiner is requested to review the documents and determine the extent of the materiality of the document disclosures with respect to the present invention.

The discussion of any art and the citation of any document herein is not to be construed as an admission that the art or document disclosure is necessarily within the invention

field of endeavor, that the art or document disclosure is necessarily prior in time to a particular date which may be relevant to the instant patent application, and/or that the art or document disclosure is otherwise necessarily prior art as defined by the patent law with respect to the instant invention and application.

Also, there is reserved the right to later set forth how the instant invention is distinguished over the disclosure of any document or other art, including the disclosures of the art and documents recited herein, that may be cited by the Examiner in rejecting a claim in the instant patent application.

The recitation herein of the art and documents is not to be construed as an assertion that more pertinent art could not possibly be in existence.

If any fees or petition are believed to be necessary, please charge our Deposit Account No. 23-0920, and deem this paper to be the required petition.

Respectfully submitted,

By   
Irene M. Reiningr, Reg. No. 48,439

December 10, 2002

Enclosures:

Form PTO-1449

Documents A1-A71 in 3 Binders

Welsh & Katz, Ltd.  
22nd Floor  
120 South Riverside Plaza  
Chicago, Illinois 60606  
312/655-1500

(Rev. 5/92) Comparable to Form PTO-1449		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. ICC-102.1 (4564-81175)	Serial No. 09/931,315
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)		Applicants Ashley J. Birkett			
		Filing Date August 15, 2001	Group		

## U.S. PATENT DOCUMENTS

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	A1	4,818,527	04/1989	Thornton, et al.	424	88	
	A2	4,882,145	11/1989	Thornton, et al.	424	88	
	A3	5,143,726	09/1992	Thornton, et al.	424	88	
	A4	5,928,902	07/1999	DeWilde, et al.	435	69.3	
	A5	5,990,085	11/1999	Ireland, et al.			
	A6	6,231,864	5/2001	Birkett	424	189.1	
	A7	5,614,194	3/1997	Colman, et al.	424	191.1	
	A8	4,886,782	12/1989	Good, et al.	514	12	

## FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	A9	WO 01/98333	12/27/01	PCT				
	A10	WO 99/40934	8/19/99	PCT				
	A11	WO 00/32625	6/8/2000	PCT				
	A12	WO 01/27281	4/19/2001	PCT				
	A13	WO 02/14478	2/21/2002	PCT				
	A14	WO 02/13765	2/21/2002	PCT				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

A15	Schodel et al., <i>J. Exp. Med.</i> (1994) 180(3): p. 1037-46
A16	Pumpens et al., <i>Intervirology</i> (1995) 38:63-74
A17	Metzger et al., <i>J. Gen. Virol.</i> (1998) 79:587-590
A18	Hoffman et al., <i>Nat. Med.</i> (1997) 3(1):80-83
A19	Conway et al., <i>Nature</i> , (1997) 386:91-94
A20	Bottcher et al., <i>Nature</i> , (1997) 386:88-91
A21	Zheng et al., <i>J. Biol. Chem.</i> , (1992) 267(13):9422-9429
A22	Birnbaum et al., <i>J. Virol.</i> (1990) 64, 3319-3330
A23	Clarke et al., <i>Vaccines</i> (1991) 91, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, pp.313-318

Examiner	Date Considered
----------	-----------------

\*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(Rev. 5/92) Comparable to Form PTO-1449		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. ICC-102.1 (4564-81175)	Serial No. 09/931,315
<b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)				Applicants Ashley J. Birkett	
		Filing Date August 25, 2001	Group		
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>					
	A24	Gallina et al. <i>J. Virol.</i> (1989) <b>63</b> :4645-4652			
	A25	Inada et al. <i>Virus Res.</i> , (1989) <b>14</b> :27-48			
	A26	Maassen et al. <i>Arch. Virol.</i> (1994) <b>135</b> :131-142			
	A27	Schodel et al. <i>Infect. Immunol.</i> (1994) <b>62</b> :1669-1676			
	A28	Ulrich et al. <i>Adv. Virus Res.</i> <b>Vol. 50</b> (1998) Academic Press pages 141-182			
	A29	Zlotnick et al. (1997) <i>Proc. Nat'l. Acad. Sci., USA</i> , <b>94</b> :9556-9661			
	A30	Nierynck et al. (Oct. 1999) <i>Nature Med.</i> , <b>5</b> (10):1157-1163			
	A31	Kratz et al. (1999) <i>Proc. Natl. Acad. Sci., USA</i> , <b>96</b> :1915-1920			
	A32	Marlar, T., et al., <i>Trans. R. Soc. Trop. Med. Hyg.</i> , (1995) <b>89</b> (3): p. 307-308			
	A33	Garg et al., <i>Trans. R. Soc Trop. Med. Hyg.</i> , (1995) <b>89</b> (6): p. 656-657			
	A34	Baird et al., <i>Am. J. Trop. Med. Hyg.</i> , (1991) <b>44</b> (5): p. 547-552			
	A35	Baird et al., <i>Trans R Soc Trop Med Hyg.</i> , (1996) <b>90</b> (4): p. 409-411			
	A36	Baird et al., <i>J. Infect. Dis.</i> , (1995) <b>171</b> (6): p. 1678-1682			
	A37	Murphy et al., <i>Lancet</i> , (1993) <b>341</b> (8837): p. 96-100			
	A38	Schwartz et al., [letter]. <i>N. Engl. J. Med.</i> , (1991) <b>324</b> (13): p. 927			
	A39	Rieckmann et al., <i>Lancet</i> , (1989) <b>2</b> (8673): p. 1183-1184			
	A40	Charoenlarp et al., <i>Southeast Asian J. Trop. Med. Public Health</i> , (1973) <b>4</b> (1): p. 135-137			
	A41	Krotoski, [letter]. <i>N. Engl. J. Med.</i> , (1980) <b>303</b> (10): p. 587			
	A42	Schuurkamp et al., <i>Trans. R. Soc. Trop. Med. Hyg.</i> , (1992) <b>86</b> (2): p. 121-122			
	A43	Good, et al., <i>Annu. Rev. Immunol.</i> , (1998) <b>16</b> : p. 57-87			
	A44	Clyde et al., <i>Am. J. Med. Sci.</i> , (1973) <b>266</b> (6): p. 398-403			
	A45	Rieckmann et al., <i>Trans. R. Soc. Trop. Med. Hyg.</i> , (1974) <b>68</b> (3): p. 258-259			
	A46	Zavala et al., <i>Science</i> , (1985) <b>228</b> (4706): p. 1436-40			
	A47	Nussenzweig et al., <i>Ciba Found. Symp.</i> , (1986) <b>119</b> : p. 150-163			
	A48	Etlinger et al., <i>Immunology</i> , (1988) <b>64</b> (3): p. 551-558			
	A49	Etlinger et al., <i>J. Immunol.</i> , (1988) <b>140</b> (2): p. 626-633			
	A50	Herrington et al., <i>Nature</i> , (1987) <b>328</b> (6127): p. 257-259			
Examiner			Date Considered		
*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.					

(Rev. 5/92) Comparable to Form PTO-1449		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. ICC-102.1 (4564-81175)	Serial No. 09/931,3155
<b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)		<b>Applicants</b> Ashley J. Birkett			
		<b>Filing Date</b> August 25, 2001	<b>Group</b>		
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>					
	A51	Ballou et al., <i>Lancet</i> , (1987) 1(8545): p. 1277-1281			
	A52	Good et al., <i>Science</i> , (1987) 235(4792): p. 1059-62			
	A53	Calvo-Calle et al., <i>J. Immunol.</i> , (1993) 150(4): p. 1403-1412			
	A54	Moreno et al., <i>Int. Immunol.</i> , (1991) 3(10): p. 997-1003			
	A55	Stoute et al., <i>N. Engl. J. Med.</i> , (1997) 336(2): p. 86-91			
	A56	Stoute et al. <i>J. Infect Dis.</i> (1998 Oct) 178(4):1139-44			
	A57	Milich et al., <i>Science</i> , (1986) 234(4782): p. 1398-1401			
	A58	Herrington et al., <i>Am J Trop Med Hyg.</i> (1991) 45(6): p. 695-701			
	A59	Schodel et al., <i>Behring Inst. Mitt.</i> (1997) (98): p. 114-119			
	A60	Seifer et al., <i>Intervirology</i> (1995) 38:47-62			
	A61	Qari et al. <i>Lancet</i> (1993) 341:780-783			
	A62	Moreno et al. <i>J. Immunol.</i> (1993) 151(1): 489-499			
	A63	Hoffman et al. <i>Malaria Vaccine Development</i> , Chapter 3: Attacking the Infected Hepatocyte, 1996 American Society for Microbiology, Washington, D.C., pp. 35-75			
	A64	Calvo-Calle et al. <i>J. Immunol.</i> (1997) 159(3): p. 1362-1373			
	A65	Coatney et al. (1962) 9:290-293			
	A66	Krüger et al. <i>Biol. Chem.</i> (1999) 380:275-276			
	A67	Nardin et al. <i>J. Exp. Med.</i> (1982) 156:20-30			
	A68	Poster presented by J. Haron at the Center for Advanced Technology and Medicine (CABM) Symposium, Rutgers University Medical Center on October 13-14, 1999			
	A69	Isagulants et al. <i>Immunol. Ltr.</i> (1994) 42:173-178			
	A70	Schodel et al. <i>J. Biotechnol.</i> (1996) 44:91-96			
	A71	Wynne et al., <i>Mol. Cell</i> (June 1999) 3:771-780			
Examiner			Date Considered		
*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.					